#### THAT WHICH IS CLAIMED IS:

# 1. A compound according to Formula I:

$$\begin{array}{c|c}
R_2 \\
X_1 \\
X_3 \\
R_1
\end{array}$$

$$\begin{array}{c|c}
R_3 \\
R_3 \\
\end{array}$$

$$\begin{array}{c|c}
R_3 \\
R_1
\end{array}$$

#### wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

 $X_2$  and  $X_4$  are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

 $R_7$  and  $R_8$  are each independently selected from the group consisting of H and alkyl.

2. The compound according to Claim 1, wherein:

 $X_1$  is O;

X<sub>2</sub> is C;

X<sub>3</sub> is NH

X<sub>4</sub> is N and

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each H.

3. The compound according to Claim 1, wherein A is

and R<sub>6</sub> is alkyl.

4. The compound according to Claim 1, wherein A is

$$N \longrightarrow R_7$$

and R<sub>7</sub> and R<sub>8</sub> are each H.

- 5. The compound according to Claim 1, wherein  $R_1$  is an amino group.
  - 6. The compound according to Claim 1, wherein  $R_1$  is a nitro group.
- 7. The compound according to Claim 1, wherein the compound is represented by the formula:

8. The compound according to Claim 1, wherein the compound is represented by the formula:

9. The compound according to Claim 1, wherein the compound is represented by the formula:

10. The compound according to Claim 1, wherein the compound is represented by the formula:

- 11. A pharmaceutical composition comprising a compound of Claim 1, in a pharmaceutically acceptable carrier.
- 12. The pharmaceutical composition according to Claim 11, wherein the composition is formulated for intravenous administration.
- 13. The pharmaceutical composition according to Claim 11, wherein the composition is formulated for oral administration.

## 14. A compound according to Formula II:

$$R_1$$
 $X_2$ 
 $X_1$ 
 $X_3$ 
 $R_3$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_4$ 
 $X_5$ 
 $X_4$ 
 $X_5$ 
 $X_5$ 
 $X_5$ 
 $X_7$ 
 $X_8$ 
 $X_8$ 

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NHR_6$ 

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl.

- 15. A pharmaceutical composition comprising a compound of Claim 14, in a pharmaceutically acceptable carrier.
- 16. The pharmaceutical composition according to Claim 15, wherein the composition is formulated for intravenous administration.
- 17. The pharmaceutical composition according to Claim 15, wherein the composition is formulated for oral administration.

#### 18. A compound according to Formula III:

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halo, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl.

- 19. A pharmaceutical composition comprising a compound of Claim 18, in a pharmaceutically acceptable carrier.
- 20. The pharmaceutical composition according to Claim 19, wherein the composition is formulated for intravenous administration.
- 21. The pharmaceutical composition according to Claim 19, wherein the composition is formulated for oral administration.

## 22. A compound according to Formula IV:

$$R_1$$
 $X_2$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_3$ 

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

 $R_7$  and  $R_8$  are each independently selected from the group consisting of H and alkyl.

- 23. A pharmaceutical composition comprising a compound of Claim 22, in a pharmaceutically acceptable carrier.
- 24. The pharmaceutical composition according to Claim 23, wherein the composition is formulated for intravenous administration.
- 25. The pharmaceutical composition according to Claim 23, wherein the composition is formulated for oral administration.

## 26. A compound according to Formula V:

$$\begin{array}{c|c}
R_1 & X_2 \\
\hline
X_1 & X_2
\end{array}$$

$$\begin{array}{c|c}
R_3 \\
A
\end{array}$$

$$\begin{array}{c|c}
(V) \\
\end{array}$$

## wherein:

X<sub>1</sub> is independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> is CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_8$ , and  $NHR_8$ ;

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl.

## 27. A compound according to Claim 26, wherein:

 $X_1$  is O;

X<sub>2</sub> is C; and

R<sub>2</sub> and R<sub>3</sub> are each H.

#### 28. A compound according to Claim 26, wherein A is

$$N \xrightarrow{R_7} R_8$$

and R<sub>7</sub> and R<sub>8</sub> are each H.

- 29. A compound according to Claim 26, wherein R<sub>1</sub> is alkoxy.
- 30. A compound according to Claim 26, wherein the compound is represented by the formula:

- 31. A pharmaceutical composition comprising a compound of Claim 30, in a pharmaceutically acceptable carrier.
- 32. The pharmaceutical composition according to Claim 31, wherein the composition is formulated for intravenous administration.
- 33. The pharmaceutical composition according to Claim 31, wherein the composition is formulated for oral administration.
  - 34. A compound according to Formula VI:

$$\begin{array}{c|cccc}
R_1 & & & \\
\hline
X_1 & & & \\
\hline
X_1 & & & \\
\end{array}$$

$$\begin{array}{c}
R_3 \\
A
\end{array}$$

$$\begin{array}{c}
(VI)
\end{array}$$

wherein:

 $X_1$  is selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;  $X_2$  is CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
  $NHR_6$ ,  $NH$   $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_8$ ,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl.

- 35. The compound according to Claim 34, wherein  $X_1$  is O and  $X_2$  is C.
- 36. The compound according to Claim 34, wherein  $X_1$  is NH and  $X_2$  is C.
- 37. The compound according to Claim 34, wherein  $X_1$  is S and  $X_2$  is C.
- 38. The compound according to Claim 34, wherein  $X_1$  is S and  $X_2$  is N.
- 39. The compound according to Claim 34, wherein the compound is represented by the formula

$$HN$$
 $NH_2$ 
 $NH_2$ 

40. The compound according to Claim 34, wherein the compound is represented by the formula

$$H_2N$$
 $H$ 
 $NH$ 
 $NH$ 
 $NH_2$ 

41. The compound according to Claim 34, wherein the compound is represented by the formula

42. The compound according to Claim 34, wherein the compound is represented by the formula

43. The compound according to Claim 34, wherein the compound is represented by the formula

$$H_2$$
  $H_2$   $H_3$   $H_4$   $H_4$   $H_4$   $H_5$   $H_5$   $H_6$   $H_7$   $H_8$   $H_8$ 

44. The compound according to Claim 34, wherein the compound is represented by the formula

$$H_2N$$
 $H_2N$ 
 $H_3N$ 
 $H_4N$ 
 $H_4N$ 

45. The compound according to Claim 34, wherein the compound is represented by the formula

$$H_2N$$
 $H$ 
 $H$ 
 $H$ 
 $H$ 
 $H$ 
 $H$ 
 $H$ 
 $H$ 

46. The compound according to Claim 34, wherein the compound is represented by the formula

47. The compound according to Claim 34, wherein the compound is represented by the formula

48. The compound according to Claim 34, wherein the compound is represented by the formula

49. The compound according to Claim 34, wherein the compound is represented by the formula

- 50. A pharmaceutical composition comprising a compound of Claim 34, in a pharmaceutically acceptable carrier.
- 51. The pharmaceutical composition according to Claim 50, wherein the composition is formulated for intravenous administration.
- 52. The pharmaceutical composition according to Claim 50, wherein the composition is formulated for oral administration.
- 53. A method of treating bovine viral diarrhea virus (BVDV) infection in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula I and Formula II:

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the bovine viral diarrhea virus (BVDV) infection.

- 54. The method according to Claim 53, wherein the compound is a compound of Formula I.
- 55. The method according to Claim 53, wherein the compound is represented by the formula:

- 56. The method according to Claim 53, wherein the subject is a cow.
- 57. The method according to Claim 53, wherein the subject is an embryo.
- 58. The method according to Claim 53, wherein the compound is administered intravenously.

- 59. The method according to Claim 53, wherein the compound is administered orally.
- 60. A method of treating bovine viral diarrhea virus (BVDV) infection in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula III and Formula IV:

$$R_{1}$$
 $X_{2}$ 
 $X_{3}$ 
 $X_{4}$ 
 $X_{3}$ 
 $X_{4}$ 
 $X_{4}$ 
 $X_{4}$ 
 $X_{5}$ 
 $X_{4}$ 
 $X_{5}$ 
 $X_{4}$ 
 $X_{5}$ 
 $X_{4}$ 
 $X_{5}$ 
 $X_{4}$ 
 $X_{5}$ 
 $X_{4}$ 
 $X_{5}$ 
 $X_{5}$ 
 $X_{5}$ 
 $X_{7}$ 
 $X_{8}$ 
 $X_{8}$ 

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NH$ 
 $NHR_6$ ,  $NHR_6$ ,  $NHR_8$ ,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the bovine viral diarrhea virus (BVDV) infection.

61. A method of treating bovine viral diarrhea virus (BVDV) infection in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula V and Formula VI:

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_8$ 

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the bovine viral diarrhea virus (BVDV) infection.

- 62. The method according to Claim 61, wherein the subject is a cow.
- 63. The method according to Claim 61, wherein the subject is an embryo.
- 64. The method according to Claim 61, wherein the compound is administered intravenously.
- 65. The method according to Claim 61, wherein the compound is administered orally.

66. The method according to Claim 61, wherein the compound is represented by the formula:

67. The method according to Claim 61, wherein the compound is represented by the formula

68. The method according to Claim 61, wherein the compound is represented by the formula

69. The method according to Claim 61, wherein the compound is represented by the formula

70. The method according to Claim 61, wherein the compound is represented by the formula

71. The method according to Claim 61, wherein the compound is represented by the formula

$$\begin{array}{c|c} & H \\ N \\ NH \\ \end{array}$$

72. The method according to Claim 61, wherein the compound is represented by the formula

73. The method according to Claim 61, wherein the compound is represented by the formula

$$H_2N$$
 $H$ 
 $H_2N$ 
 $H$ 
 $HN$ 
 $NH$ 
 $NH$ 
 $NH_2$ 

74. The method according to Claim 61, wherein the compound is represented by the formula

75. The method according to Claim 61, wherein the compound is represented by the formula

$$\begin{array}{c|c} CH_3 & CH_3 \\ NH & NH_2 \\ H_2N & H \end{array}$$

76. The method according to Claim 61, wherein the compound is represented by the formula

77. The method according to Claim 61, wherein the compound is represented by the formula

$$\begin{array}{c|c} CH_3 & CH_3 \\ NH & NH_2 \\ H_2N & H \end{array}$$

78. A method of treating hepatitis C infection in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula I and Formula II:

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

 $X_2$  and  $X_4$  are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the hepatitis C infection.

79. The method according to Claim 78, wherein the compound is a compound of Formula I.

80. The method according to Claim 78, wherein the compound is represented by the formula:

- 81. The method according to Claim 78, wherein the subject is a human.
- 82. The method according to Claim 78, wherein the compound is administered intravenously.
- 83. The method according to Claim 78, wherein the compound is administered orally.
- 84. A method of treating hepatitis C infection in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula III and Formula IV:

$$R_1$$
 $X_2$ 
 $X_3$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_3$ 
 $X_4$ 
 $X_5$ 
 $X_4$ 
 $X_4$ 
 $X_4$ 
 $X_5$ 
 $X_4$ 
 $X_5$ 
 $X_4$ 
 $X_5$ 
 $X_4$ 
 $X_4$ 
 $X_5$ 
 $X_5$ 
 $X_5$ 

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_8$ 

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the hepatitis C infection.

85. A method of treating hepatitis C infection in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula V and Formula VI:

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

X<sub>2</sub> and X<sub>4</sub> are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_6$ ,  $NHR_8$ 

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the hepatitis C infection.

- 86. The method according to Claim 85, wherein the subject is a human.
- 87. The method according to Claim 85, wherein the compound is administered intravenously.
- 88. The method according to Claim 85, wherein the compound is administered orally.
- 89. The method according to Claim 85, wherein the compound is represented by the formula:

- 90. The method according to Claim 85, wherein the compound is represented by the formula

$$HN$$
 $NH_2$ 
 $NH_2$ 

91. The method according to Claim 85, wherein the compound is represented by the formula

$$H_2N$$
 $H$ 
 $NH$ 
 $NH_2$ 
 $NH$ 
 $NH_2$ 

92. The method according to Claim 85, wherein the compound is represented by the formula

93. The method according to Claim 85, wherein the compound is represented by the formula

94. The method according to Claim 85, wherein the compound is represented by the formula

95. The method according to Claim 85, wherein the compound is represented by the formula

96. The method according to Claim 85, wherein the compound is represented by the formula

97. The method according to Claim 85, wherein the compound is represented by the formula

$$\begin{array}{c|c} CI & CI \\ \hline NH & NH_2 \\ \hline H_2N & H \\ \end{array}$$

98. The method according to Claim 85, wherein the compound is represented by the formula

$$H_2N$$
 $H_2N$ 
 $H_3$ 
 $CH_3$ 
 $CH_3$ 
 $NH$ 
 $NH_2$ 
 $NH_2$ 

99. The method according to Claim 85, wherein the compound is represented by the formula

100. The method according to Claim 85, wherein the compound is represented by the formula

$$\begin{array}{c|c} CH_3 & CH_3 \\ NH & S & NH \\ NH_2N & H & NH_2 \\ \end{array}$$

101. A method of treating a member of the *Flaviviridae* family of viruses in a subject in need of such treatment, comprising administering to the subject a compound selected from the group consisting of Formula I and Formula II:

wherein:

 $X_1$  and  $X_3$  are each independently selected from the group consisting of O, S and NR<sub>9</sub>, wherein R<sub>9</sub> is H or alkyl;

 $X_2$  and  $X_4$  are each independently CH or N;

A is selected from the group consisting of H, alkyl, aryl,

$$NH$$
 $NHR_6$ ,  $NHR_6$ 

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro and amino groups;

R<sub>6</sub> is H, alkyl or aryl; and

R<sub>7</sub> and R<sub>8</sub> are each independently selected from the group consisting of H and alkyl; or a pharmaceutically acceptable salt thereof, in an amount sufficient to treat the bovine viral diarrhea virus (BVDV) infection.

- 102. The method according to Claim 101, wherein the compound is a compound of Formula II.
- 103. The method according to Claim 101, wherein the compound is represented by the formula:

104. The method according to Claim 101, wherein the compound is represented by the formula:

105. The method according to Claim 101, wherein the compound is administered intravenously.

106. The method according to Claim 101, wherein the compound is administered orally.